

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Xberg et al.

Examiner: Ralis, Stephen J.

Serial No.: 10/581,284

Group Art Unit 3742

Filed: October 23, 2006

Docket: 1304-7

For: **METHOD, APPARATUS
AND SOFTWARE FOR
GAS METAL ARC WELDING
WITH A CONTINUOUSLY
FED ELECTRODE**

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION

I, Henrik Wörnberg, hereby declare:

1. I am a patent engineer with ESAB AB, assignee of the above-identified application and have read and understand the Office Action mailed May 27, 2009 by the Patent and Trademark Office and applied art, namely JP7-9149 to Kawamoto et al and U.S. Pat. No. 6,388,233 to Aberg et al;
2. The invention claimed in the above-identified application improves welding application by both spray arc/short arc welding and pulsed welding. Both procedures suffer individual disadvantages, especially when welding vertical V-joints. The claimed invention provides excellent results when welding vertical V-joints, with it now being possible to avoid previously-required weaving motion during welding. Need for a backing bar during such welding has been eliminated. Surprisingly, the overall welding procedure is now much more simply carried out;
3. In particular, it is now possible to weld thicker material, i.e., material of up to 10 mm. thick and both low and high alloyed steel, e.g., stainless

steel, in addition to aluminum. There is deeper penetration into the V-joint when welding the same, together with faster running time. Furthermore, it is possible to switch between different heat and power levels in versatile manner during V-joint welding depending upon dimensions encountered;

4. Kawamoto et al are limited to welding galvanized steel, i.e., zinc coated steel, and only directed to improving such welding of galvanized steel. There is no mention of spray arc welding in Kawamoto et al. The welding according to Kawamoto et al just "boils away" the zinc coating on the steel, there being no suggestion in Kawamoto et al of controlling power levels in welding to optimize heat delivery to the welding head;

5. Aberg et al are just directed to dealing with unwanted short-circuiting occurring during pulse welding. Therefore, even when considering both Kawamoto et al and Aberg et al in combination, I, one skilled in the art, would not be lead to practicing the claimed invention to achieve the concomitant advantages; and

6. I hereby declare all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

26 Aug 2009

Date

Henrik Wörnberg

Henrik Wörnberg